SANDIA CORPORATION

LAB NEWS

PRIME CONTRACTOR TO THE ATOMIC ENERGY COMMISSION / ALBUQUERQUE, NEW MEXICO / LIVERMORE, CALIFORNIA

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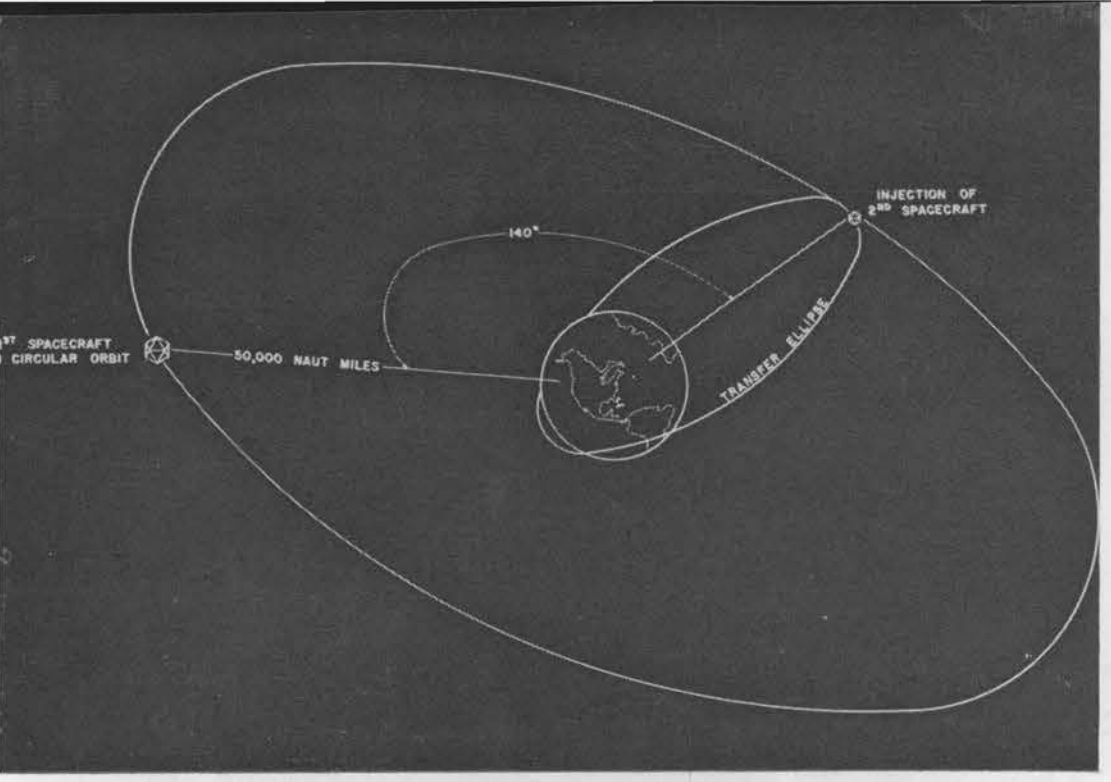


DETECTION SATELLITES' orbits are shown in this drawing. From the transfer ellipse, both satellites were accelerated into the circular orbit, but the second followed the first after traveling the transfer ellipse twice, some 40 hours later.

Sandia's Logics Systems on New Satellites Provide Good News

Four sentinel satellites, able to detect nuclear explosions in space, now orbit the earth. The second set of detection satellites was shot aloft from Cape Kennedy Friday, July 17.

On board are improved X-ray, neutron, and gamma ray sensors as well as two newly-developed sensors. Logics systems on board were designed by Space Projects Division I, 7432; they provide data handling and reduction of measurements made by the sensors and make possible relay of only the most significant data to ground stations.

The "payloads" were turned on after a smoothly executed maneuver in deep space. Launched in tandem, the satellites were separated and accelerated into new orbits after the original "parking" orbit was obtained.

"Everything worked successfully," William C. Myre, 7432 supervisor and project leader, told a group of Sandians last week. Members of the group represented many Sandia organizations. Participation in the project was almost laboratory-wide.

Bill related how the Atlas-Agena rocket left the pad at Cape Kennedy and climbed to an altitude of just over 100 nautical miles. Separation of the Agena upper stage was accomplished successfully. Following burnout of the Agena, the spacecraft were separated by springs.

Cold gas jets fired aboard the satellites and started them spinning at about two revolutions per second. The spacecraft separated from each other and the spin apparatus.

Then, the spacecraft continued their flight in the long transfer ellipse to the 55,000-mile apogee injection altitude. It was at this point that the first spacecraft's solid propellant motor ignited and moved it into a circular orbit inclined to the earth's equator by about 57 degrees.

The second spacecraft continued in the highly elliptical orbit until it reached the 55,000-mile apogee the second time. Then, its motor fired and it moved into the same circular orbit as the first, only following it by about 140 degrees. Thus, they are about 100,000 miles apart.

Eighteen hours after launch, the payload in the first satellite was switched on and preliminary calibrations were performed. After another 40 hours, the second satellite instrumentation was checked.

"All systems are working successfully," Bill said. "It will take some time to evaluate their performance completely, but early data looks extremely good."

New instrumentation aboard the satellites includes an electron-proton spectrometer designed to help evaluate the effect of background radiation on the other sensors. The second new instrument is designed to measure solar X-rays and to follow their fluctuation as associated with so-called solar flares and other disturbances on and within the sun. The instrument will be able to measure X-ray output and fluctuation with resolution to a thousandth of a second.

Physicists of Los Alamos Scientific Laboratory, Group P-4, are responsible for the overall scientific objectives of the program and provide sensor design and fabrication. J. H. Coon is the P-4 project leader.

Logics systems contributed by Sandia Laboratory correlate and compare detector outputs in a way which permits the satellites to differentiate known natural background radiation from radiation associated with nuclear bursts. They also convert pertinent background radiation and spacecraft "state-of-health" data to a form suitable for transmission to the ground.

The logics systems in the new satellites are more complex than those in the first pair. The original satellites' logics systems contained more than 23,000 components, including more than 2000 transistors. The number of these components has been

(Turn to Page 3, please)

E. S. Roth Authors Functional Gaging ASTME Textbook

Edward S. Roth of Advanced Manufacturing Development Division 2564 is the author of a new book just published by the American Society of Tool and Manufacturing Engineers. "Functional Gaging of Positionally Toleranced Parts" describes fixed-element gaging for true-position dimensioning and provides applications for gage designers, product designers, and process engineers.

The five parts of the book cover definitions, principles, and standards; fundamentals of positional tolerancing; design principles for future relation gaging; design principles for feature location and relation gaging; and gaging form tolerances.

Ed was asked to write the book about two years ago by the National Technical Publications Committee of ASTME. He had previously contributed to the ASTME textbook, "Fundamentals of Tool Design."

Ed has been at Sandia Laboratory since 1951 engaged in product definition, procedures, and advanced manufacturing development activities. He is a member of ASTME, American Institute of Industrial Engineers, and American Society for Quality Control.

First Aid Know-How Put to Good Use in California Crash

M. J. Madlener (2544) has served as operations officer for the Civil Defense Organization and disaster coordinator for the Red Cross. He used his experience to good advantage this month in administering first aid to a youngster after an automobile and truck collision in Montebello, Calif.

The boy received multiple deep lacerations on his face, deep cuts on one knee, and a possible arm fracture when he was thrown into the windshield when the accident occurred.

Mr. Madlener arrived on the scene moments after the accident. He administered first aid to the youth and kept order among the lesser-injured persons and spectators until the police and ambulance crew arrived.

His presence of mind and quick thinking exemplify the benefits of first aid training.

Helen M. Walsh Awarded Top Professional Secretary Honors

Helen M. Walsh
— Certified Professional Secretary —

Recognition as a Certified Professional Secretary was recently awarded to Helen M. Walsh (3126), secretary for Project Division 1523.

A CPS is one who successfully completes the certifying examination sponsored by the National Secretaries Association. The test is administered by leading colleges and universities throughout the United States, Canada, and Puerto Rico. Helen earned her CPS certificate by completing a rigorous two-day examination at the University of New Mexico. The examination covers skills, techniques, and knowledge of the following areas: personal adjustment and human relations; business administration; business law; and secretarial accounting, procedures, and skills.

"This award is a satisfaction to me both personally and professionally," Helen commented. "I hope other secretaries become interested. A program like this is certainly good training. I particularly enjoyed the study and preparation involved because it reopened an educational program for me."

Before coming to Sandia three years ago, Helen was employed by a firm in Trenton, Mo., for 19 years.

In the 14 years that the Institute for Certifying Secretaries has been conducting the annual examination, about 3000 of 8000 candidates have been certified. New Mexico has 23 CPS's. Helen was one of two women certified in this state in 1964. Sandia Laboratory has four other employees who have earned the CPS certificate: Winifred Sandusky, 6000; Joanne Rush, 4600; Betty Pickel, 4300; and Jo Hanna, 1000.

In a letter to Helen's supervisor, W. E. Treibel, notifying him of her certification, the Dean of the Institute for Certifying Secretaries said, "We commend your secretary on her attainment of this professional recognition."

Patent Assigned AEC in Name of Robert P. Stromberg

A patent for a weightlessness switch has been assigned to the Atomic Energy Commission in the name of Robert P. Stromberg (1322). The patent is number 3,141,084.

The invention fulfills a need in the telemetering field, particularly in the space technology area, for an electric switch responsive to environmental conditions, very small in size, highly reliable, and capable of omni-directional operation. No external source of electrical energy is necessary to operate the switch.

A switch-contained cavity is partly filled with a high density conducting liquid. When the switch approaches weightlessness, the shape of the conducting liquid changes due to surface tension and thereby closes the switch.

If a time delay in the actuation switch is desired, a highly viscous non-conducting fluid can be used to fill the cavity completely, preventing a rapid change in shape of the conducting fluid. This addition is also valuable where shock and vibration are present to prevent short circuiting.

RETIREMENT CEREMONIES for Kenner F. Hertford, Manager of Albuquerque Operations Office of the AEC, were held on Sandia Base last week. Mr. Hertford, who is a retired Major General, was retiring from his AEC post after nine years service. Mr. Hertford, in the center, has on his right Admiral E. O'Beirne, Commanding Officer, Field Command, Defense Atomic Support Agency. Standing left of Mr. Hertford is A. R. Luedecke, who is retiring from the post of General Manager, U.S. Atomic Energy Commission. Mr. Hertford leaves his position today.

Editorial Comment

Looking to the ECP Campaign

In years past, Sandians have held an enviable position in Albuquerque. Sandia Laboratory, the largest employer in the state, is also the largest local contributor of funds to the agencies of the United Community Fund. We lead the way during each UCF drive.

Our record, however, could be vastly improved. Currently, only 83 per cent of Sandians who are eligible participate in the Employees' Contribution Plan. Of these, only about 10 to 15 per cent contribute a fair share, that is, a sum equal to an hour's pay per month. And some other, smaller groups in the community have a higher percentage of participation, both in terms of the number of employees belonging to their fund-raising plans and in terms of those giving a fair share of their income through these organizations.

Our job at Sandia is one of great responsibility not only to the entire nation but also to the people of the community. We're responsible members of the community; as such, we accept the challenge to provide help for those other members of our community who, although they are helping themselves, are aided in large part by our support.

With considerable courage, these people face their challenge. It's perhaps because they are willing to make their effort—an almost superhuman one in some cases—that they deserve our help. Indeed, they receive it through our contributions to the Employees' Contribution Plan and through the personal participation of many Sandians who contribute their time and efforts directly to the agencies participating in the ECP, and to other, similar agencies.

Because we're responsible members of the community, we're responsible for making equitable contributions to the ECP agencies through our fair share gift. The amount of help we provide through our contributions could be a cause for renewed pride.

We can participate in the efforts of the members of our community who are helping themselves. The 1964 ECP fund drive will give us the opportunity to see to it that we're giving our fair share—an hour's pay per month.

Economics Teaching Due For Improvement

"Economic Illiterate" are the words frequently used to describe an average American. Statistics help affirm the accusation that he does not have the minimum economic understanding essential for good citizenship.

Something is now being done about it. Economics teaching is going to be refurbished.

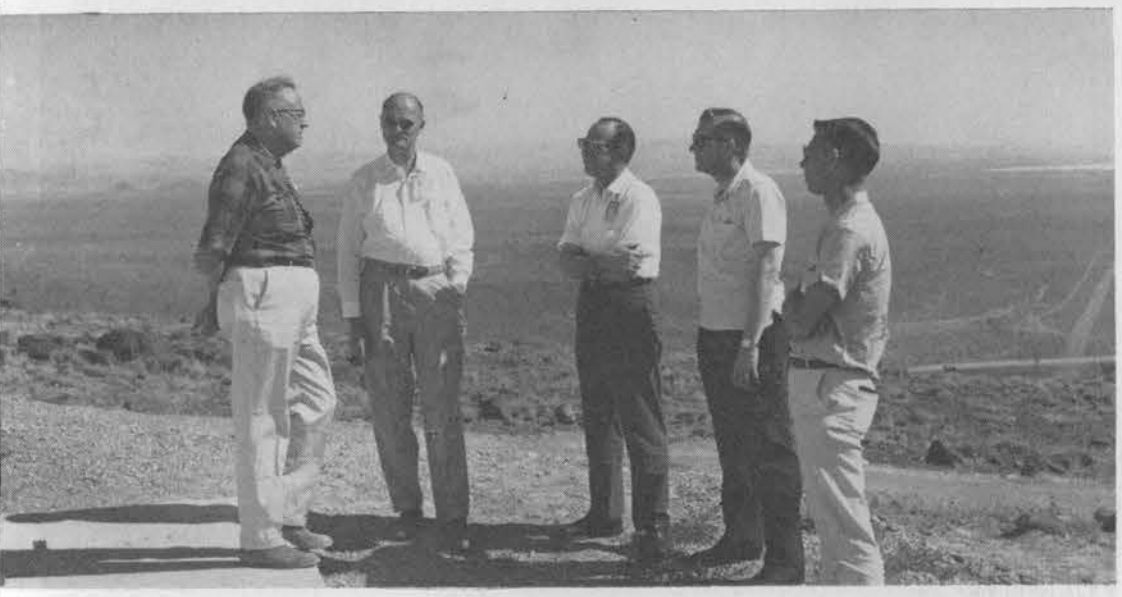
The Joint Council on Economic Education is launching a $2.5 million, three-year program which will involve 30 school systems from coast to coast. One of these systems is in Contra Costa County, Calif., where live a number of Sandia employees at Livermore Laboratory.

School systems participating in the project will serve as laboratories to develop and test a wide range of teaching methods and materials. The program will concentrate on curriculum development, teacher education, and development of economic education study materials.

Essential to the program is the involvement of neighborhood colleges and universities. These schools will give remedial or introductory economics training to teachers. They will provide consultants on curriculum and materials development and will offer special courses for future economics teachers.

The Joint Council on Economic Education is an independent, non-profit, educational organization directed by educators and governed by trustees from the fields of economics, education, business, industry, agriculture, labor, government, and research.

The goal of the program is "economic competency and understanding on the part of students." The Council looks on the program as a major breakthrough in bringing about more effective economics instruction.



RECENT VISITORS to Tonopah Test Range, Nev., were conducted on a tour of the facilities by R. N. Browne (7221), left, and H. Clyde Walker (8121), extreme right. Those making the July 1 tour were (l to r) Col. MacPherson Morgan, AEC/DMA; Glenn Smith and Robert M. Neal, both staff members of a subcommittee of the Senate Armed Services Committee.

HIGH SCHOOL mathematics and science teachers attending the National Science Foundation's Summer Research Participation Program at the University of New Mexico toured several facilities at Sandia Laboratory on July 22. Here Rosa Bodenhamer (7623) is explaining operation of the 7090 computer. The visit was arranged through Community Relations Division 3143 and Professor J. E. Martinez of UNM.

G. A. Fowler to Speak in Geneva At UN Conference

The Atomic Energy Commission announced this week the names of the authors and titles of 99 U.S. papers which have been prepared for the United Nations Third International Conference on the Peaceful Uses of Atomic Energy.

Glenn A. Fowler, Vice President, Development, will present "Aero-space Safety of Isotopic and Reactor Power Sources" at the conference. The meeting will be held in the Palais des Nations in Geneva, Switzerland, from Aug. 1 through Sept. 9.

Including the U.S. papers, a total of 731 papers prepared by nuclear specialists from 37 countries and five international organizations have been accepted by the Conference committee. Approximately 300 of the papers will be presented during the 10-day meeting, while the remainder will be published in the conference proceedings.

While a wide range of subjects will be covered during the conference, the principal emphasis in technical meetings will be on nuclear power. During a series of general sessions, various topics to be discussed will include the role of nuclear energy in meeting future world energy needs; international cooperation; developments in the research reactor field; controlled fusion research; production and uses of radioisotopes; and gamma, X-ray, and neutron irradiation.

Three series of technical meetings, running concurrently with the general sessions, will explore most phases of atomic power development. All types of power reactors operating in the United States will be discussed—promising new concepts, including experience with fast reactors; nuclear reactors applied to water desalting; nuclear superheat; isotopic power sources; and maritime nuclear propulsion.

Papers also will be presented on such topics as fuel fabrication, fuel irradiation problems and reprocessing, cladding materials for nuclear fuels, control rods, power reactor siting, transportation of spent fuel, reactor safety, and radioactive waste management.

Other discussions will center around the production of heavy water, neutron activation analysis, commercial radiation processing, and engineering applications of nuclear explosives.

The conference is being sponsored by the United Nations with the assistance of the International Atomic Energy Agency. In addition to the countries participating, many more of the International Agency's 87 member states are expected to have delegates in attendance as observers.

F. A. Goss Observes 35 Years Service With Bell Laboratories

F. A. Goss, Jr., supervisor of Component Development Division 1312, observed his 35th anniversary with Bell Telephone Laboratories this month.

He joined BTL at 463 West Street in New York City and helped develop instrumentation that first plotted sound decay in rooms. Two years later he transferred to Whippany, where he had assignments in broadcast transmitter design and development until 1939, when he returned to New York City with the telephone filter group.

From 1941 to 1952, Mr. Goss worked on radar and bombing computer development at Whippany and Graybar Varick.

Mr. Goss was granted a leave of absence from BTL in 1953 for assignment at Sandia Corporation as a section supervisor in vacuum tube development. In 1955 he was promoted to division supervisor.

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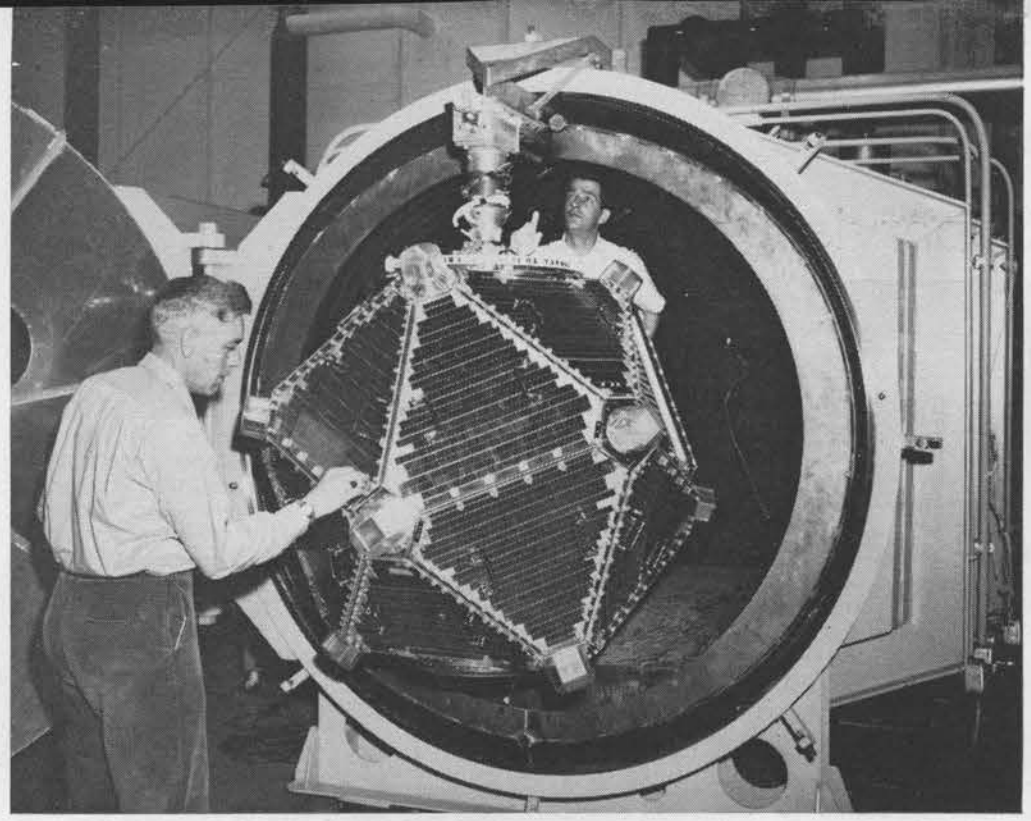


ONE OF THE twin nuclear detection satellites undergoes environmental test at Space Technology Laboratories at Redondo Beach, Calif. The chamber is called a solar simulator and was used for a continuous 168-hour test. During this time, the spacecraft was held in a vacuum and exposed to simulated sunlight and temperatures as low as -300 degrees F. Sides of the spacecraft contain 13,236 solar cells. X-ray detectors are mounted at the side intersections.

ATLAS-AGENA space booster combination lifted twin detection satellites into orbit Friday, July 17.

(Continued from Page 1)

Sandia Logics Systems

increased by about 10 per cent in the second tandem satellites.

The first pair of detector satellites were launched last October and have now completed nine months of flawless operation. More than 600 reels of data tape have been obtained containing more than four billion bits of information. The logics systems have logged more than 35 million transistor hours without failure, a remarkable performance resulting from Sandia's manufacturing development, quality control, quality assurance, and reliability activities.

Data from both sets of satellites are being recorded by a world-wide network of Air Force ground stations. After collection on magnetic tape, the data are sent here for further processing prior to final reduction at LASL.

Work started at Sandia several months ago on the next step of the program—another set of twin satellites. The new project will contain the basic, but improved, X-ray, neutron, and gamma-ray sensors; improved models of the electron-proton spectrometer and solar X-ray sensors; plus new types of sensor instrumentation.

Sandia's responsibility for the new instrumentation will be somewhat enlarged over previous projects, Bill Myre indicated.

The detection satellite program is under the overall responsibility of the Advanced Research Projects Agency of the Department of Defense. Air Force participation in the program is concerned with the development of the spacecraft, launch operations, and control of the satellites in orbit. Management of this effort is under the Air Force Systems Command's Space Systems Division. Col. L. Q. Westmoreland is Program Manager.

Design, development, fabrication, and testing of the nuclear detection spacecraft were performed by the Space Technology Laboratories of Thompson Ramo Wooldridge, Inc.

Take Note

Wives of Coronado Club members are invited to the Sanado Women's Club punch party and membership drive at 2 p.m. Tuesday, Aug. 4, at the Coronado Club. Members of interest groups within the club have prepared booths depicting club activities. Mrs. O. B. Tjeltweed is president of the club and hostesses for the day will be Mmes. J. D. Manweller, N. B. Gholson, C. R. Newton, D. M. Carlton, A. H. Koontz, J. D. Rex, N. F. Siska, and J. E. Cummings.

* * *

Flag football at Sandia Laboratory will be organized for the 1964 season at a meeting Monday, Aug. 3, according to Norris Rose (3122), Association president. Leaue play will begin about Aug. 9.

Recreation Council representatives will meet at 10 a.m. in Bldg. 610 to organize the teams. Anyone interested in participating in league play should contact his Council representative or Benefits and Services Division 3122, tel. 264-7775.

"Only experience can give you confidence in public speaking," Bob Pace (4211) says. "Best way to get it is to come to the meetings of the Free Lance Orators every Thursday noon in Rm. 125 of Bldg. 836. Everyone who wants to gets a chance to speak."

Bob will be master of ceremonies for next Thursday's meeting of the informal organization. G. B. Roberts (4422) will discuss "Courtesy——A Lost Art?"

* * *

Sandia Laboratory's four-man all-star golf team placed second in the Intra-Base Tournament held last week. Dick Kidd (1513), Tom Kelly (1551), Jerry Shinkle (1322), and Larry Woodard (4411), had a total of 620 strokes after shooting 36 holes each. Dick Kidd's 146 tied for second place.

Kirtland Air Force Base took the tourney with 599.

DOUBLE TRAILER CAFETERIA, located at the northwest corner of Bldg. 880, is providing ample seating and quick service during the lunch hour for employees working in the vicinity.

Tech Area Eating Facilities Getting Better and Better

It's bright, clean, and cool! That, in general, is what employees in Tech Area I think about the new trailer cafeteria located at the northwest corner of Bldg. 880.

The trailer will be utilized during the weeks that the regular cafeteria in Bldg. 839 is closed for alterations. Even the first week of operation, while Bldg. 839 was still open, the number of lunches served in the new facility was edging toward the 150 per day mark.

The double trailer boasts wood-paneled walls, vinyl flooring, and fluorescent lighting. Three hot entrees (different each day), salads, sandwiches, soups, desserts, and beverages are available from the stainless steel and glass serving units. The double trailer comfortably seats 60 customers and still has room for a drinking fountain and rest rooms. Many employees prefer to eat their lunches just outside at the tables and benches under the trees.

Meanwhile, that same bright, clean, cool look is being extended to Bldg. 839. An entrance lobby will lead to the serving area where portable refrigeration and hot food units will do away with long waiting lines. A diet watcher will be able to reach for a low-calorie salad and pick up a glass of iced tea without even coming face-to-face with strawberry shortcake and other calorie-laden temptations.

The dining room will seat 240 customers at several sizes of tables. A deep blue and pearl white decor will be carried out. Other special features include use of china dishes, coffee fresh-made on the premises, refrigerated air conditioning, and rest rooms.

The contractor has 60 days to complete his work, after which the special equipment will be installed. The food will continue to be catered by Anderson-Dunham Company and the Coronado Club.

G. R. Sharp of Plant Engineering's Planning Division 4541 is responsible for the design of both trailer and cafeteria facilities. T. C. Morgan of Benefits and Services Division 3122 has coordinated the activities.

Congratulations

Mr. and Mrs. A. W. Battaglia (1322), a daughter, Anna Marie, June 25.

Mr. and Mrs. Dale H. Hill (4412), a son, Jay Dale, June 26.

Mr. and Mrs. O. L. George (7422), a son, Charles Lamar, July 1.

Mr. and Mrs. Richard O. Johnson (1425), a girl, Margaret Marie, July 4.

Mr. and Mrs. Joseph F. Metrailer (1443), a son, Joseph Frederick, July 12.

Mr. and Mrs. Earl R. Gruer (4541), a son, Bruce Allan, July 11.

Mr. and Mrs. Patrick M. Moore (7212), a son, James Patrick, July 13.

Mr. and Mrs. Ken Sarason (2563), a son, Jerome Conrad, July 12.

Mr. and Mrs. John Sutton (7325), a son, Michael John, July 1.

Mr. and Mrs. John M. Farmer (4254), twin daughters, Darlene Gay, Denise Lynn, July 1.

Mr. and Mrs. Robert Baca (4254), a son, Steven, July 12.

Mr. and Mrs. C. R. Farmer (3242), a son, Charles Robert, July 15.

DINING UNDER THE TREES, on food obtained from the trailer cafeteria near Bldg. 880, is now possible. The trailer will be open while facilities in Bldg. 839 are renovated.

SANDIA'S SECURITY GUARDS must know how to operate the Corporation ambulance and properly use its special equipment.

Security Force Trains by Doing

"Training through involvement" is the approach being used by Security Standards Division 3243 in developing courses for members of Sandia's Security Force.

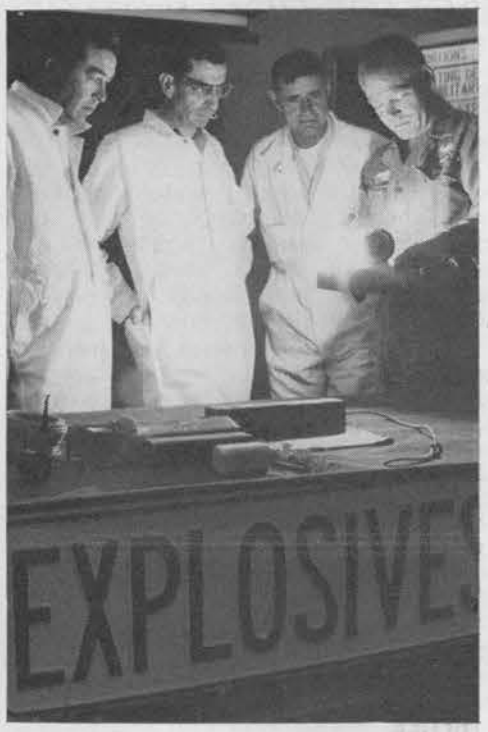
"Training by telling" is a satisfactory way to learn rules and procedures, but Walter W. Troy (3243) and F. H. Hannah (3131) decided that practical exercises based on realistic situations and field problems would be a better way to teach security functions. Normally, there is little chance to learn these functions through experience.

"We wanted to give the training more impact, yet at the same time make it more understandable," Walt said. "We hope to make each security inspector aware of the role he plays in the security program."

As a result, security inspectors have been playing "detective" in Bldg. 610; witnessing blasts from high and low explosives in Area III; putting out fires with various types of extinguishers; and receiving refresher courses in administering first aid.

The program started with special training courses for security supervisors. It has since been expanded, and the 121 guards will receive 12 days of instruction a year.

The first section dealt with developing powers of observation, and operation of locks, alarm systems, and other security protective devices. The second course included operation of the emergency gear in the ambulance and rescue equipment in the emergency truck; training in firearms; and identification, care, and handling of explosives and sabotage devices. The latter activity was instructed by members by Explosives Ordnance Disposal Unit, Field Command/DASA. The third session, which started June 22 includes a half day each of pistol training and safety, and a day of first aid.



A SABOTAGE device is demonstrated by SFC L. A. Cook to (l to r) Security Inspectors Ted Varoz, Verne Honeyfield, and M. A. Martegane as part of their special training in uses and types of low and high explosives.

AEC Quality Assurance Officials Study Late Developments, Trends

Chief inspectors and other representatives of Quality Assurance organizations from 11 AEC branch and area offices met at Sandia Laboratory last week to learn the latest developments and future trends in the QA field.

This was the first time the AEC Quality Assurance Seminar had been sponsored by Sandia Corporation. There were approximately 42 participants.

The program on Tuesday, July 21, included a tour of Quality Engineering Labs, conducted by D. S. Dreesan (2122), C. L. Johnson (2123), and E. L. Roper (2124), and the following talks: "Administration of a QA Program" by L. E. Lamkin, Director of Quality Assurance 2100; "Quality Engineering Programs" by G. H. Roth (2120); and "Sandia Corporation's Product Definition System and TIE" by W. A. Shinnick (4111).

The July 22 program included a tour of Data Processing facilities and the following talks: "Disposition of Nonconforming Material" by W. D. Wing (2111); "QAP 4.0" by A. E. Clamp (2111); "Data Processing of QAIA Data" by L. G. Wilson (2111); "Quality Assurance Inspection Procedures" by T. M. Bozone (2121); and "Some New Approaches" by Dr. Irving Burr, a professor of mathematics and statistics at Purdue University, consultant to the AEC/ALO/QA Division, and chairman of the editorial board of **Industrial Quality Control.**

At the Wednesday evening banquet held at the Coronado Club, R. A. Bice, Vice President, Engineering for Manufacture 2000, discussed "The Past and Future of Atomic Ordnance."

The seminar concluded July 23 with a talk by A. F. Cone (2110) on "Trends in the Assurance of Quality," a summary presented by W. A. Sherman (2111), and a tour of the testing facilities at Area III.

Arrangements for the seminar were made by Mr. Clamp and C. A. Richardson (AEC/ALO).

A GUEST SPEAKER at the recent Quality Assurance Seminar was Dr. Irving Burr of Purdue University (center). Arrangements for the meeting of AEC Quality Assurance officials were made by A. E. Clamp (2111), left, and Coleman Richardson (AEC/ALO/QA Division), right.

Supervisory Appointments . . .

JAMES E. SCHIRBER to supervisor of Solid-State Physics Division 5151.

Jim has been working on research projects in the same division since he came to Sandia in December 1962.

Immediately prior, he had spent a year in England on a fellowship at the University of Bristol doing Fermi surface studies.

He had also done a year of post-doctoral research at Iowa State University.

Jim has a BA degree in physics and mathematics from St. John's University in Minnesota, and a PhD degree in physics from Iowa State University. He is a member of Sigma Xi honorary society and the American Physical Society.

He served four years in the Air Force as a weather officer.

DELFRED M. OLSON to manager of Systems Engineering Department 1530.

Del has been at Sandia more than 11 years and has been associated with a weapons system group the entire time. He was promoted to section supervisor in July 1955 and to division supervisor four years later.

For a five month period in 1961, he was on loan to the Division of Military Application in Washington, D. C. to serve as a technical consultant on weapons.

Before coming to Sandia, Del was attending the University of Washington, where he received BS and MS degrees in electrical engineering. He is a member of Phi Beta Kappa, Sigma Xi, and Tau Beta Pi honorary societies.

He served two years in the Army.

Highway Work Planned For Nevada Test Site

Sandia Corporation employees who visit the AEC's Nevada Test Site will be happy to learn that there will be construction of approximately 7.8 miles of new road along the existing Mercury Highway. Bids for the work will be opened by the AEC on Sept. 1 at the Nevada Operations Office.

One section will be a road connecting the newly-located Nevada Test Site security gate with the Jackass Flats Road leading to the Nuclear Rocket Development Station. A second section will enable workers entering the Test Site to by-pass Mercury and proceed directly to the forward areas. The third section will replace a section of highway just beyond Mercury, eliminating a number of curves, reducing grades and providing for better visibility.

MORGAN L. KRAMM to manager of Upper Atmosphere Projects Department 7430.

During his 10 years at Sandia, Morgan worked in the Field Testing organization until last year when the Aerospace Programs organization was formed and he joined that organization. He participated in Operations Teapot, Redwing, Plumbbob, Hardtack, and Dominic.

Morgan was promoted to section supervisor in 1958 and division supervisor in 1960.

He has a BA degree in physics from Emporia State Teachers College in Kansas, and had a year of graduate study in radiological physics at the University of Washington under an AEC fellowship.

Morgan served two and a half years in the Army during World War II and was recalled for a year for duty in Korea.

GLENN E. SEAY to manager of Physical Research Department 5130.

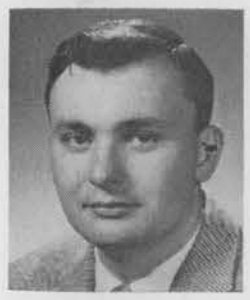
Glenn has been with Sandia Corporation since February 1962 as supervisor of Dynamic Stress Research Division 5133.

Immediately prior, he had been associated with Los Alamos Scientific Laboratory since 1947 as a research staff member in GMX-7, investigating explosive initiation and behavior of materials under shock.

He has BS and MS degrees in engineering physics, and a PhD degree in physics (with a mathematics minor), all from the University of Oklahoma.

Glenn served three years in the Navy.

He is a member of Sigma Xi and the American Physical Society.



ALBERT NARATH to manager of Physical Sciences Research Department 5150.

Al has worked in Solid-State Physics Division 5151 since he came to Sandia in March 1959. His research projects have been in the field of magnetic interactions in solids. In June 1962, he was promoted to supervisor of the division.

Prior to coming here, Al received his PhD degree in physical chemistry from the University of California at Berkeley. His BS in chemistry was conferred at the University of Cincinnati.

He is a member of the American Physical Society.

Kentucky Laboratory to Investigate Effects of Radiation on Cigarettes

Can massive doses of nuclear radiation be used to render harmless or reduce in amount those chemical compounds in cigarette smoke currently thought to be injurious to health?

The answer to this question and related questions may come as a result of studies to be undertaken by a Kentucky research laboratory under a contract administered by the Atomic Energy Commission's Oak Ridge Operations following a proposal by the AEC's Division of Isotopes Development.

Spindletop Research Center, an independent research organization of Lexington, Ky., was awarded the $20,000 contract for a six-month study of the possible effects of ionizing radiation on tobacco.

Although it is highly speculative, there is thought to exist the possibility that massive irradiation of tobacco in cigarettes prior to smoking might modify some of the compounds that are thought to produce harmful products in the smoke from tobacco burning at high temperatures.

Spindletop plans to irradiate standard, unfiltered, packaged cigarettes with massive doses of highly penetrating gamma radiation from a cobalt-60 source at Brookhaven National Laboratory, Upton, Long Island, N.Y. Irradiation by gamma rays leaves no residual radioactivity in the material being irradiated.

The irradiated cigarettes will be "smoked" by an automatic smoking machine, and the smoke from these irradiated cigarettes will be compared with the smoke from unirradiated cigarettes. In this analysis, Spindletop scientists hope to determine if the radiation doses had any effect on the pyrolitic chemical products.

If these preliminary studies show that nuclear radiation may be a means of reducing the abundance or altering the nature of certain undesirable products in cigarettes, additional research is expected to follow.

CHAMPIONS of the Sandia Laboratory American fast pitch league, 1300-1400, defeated 1100 two straight recently to take the crown. In the back row, from left, are D. H. Weingarten (1422), J. A. Cooper (1422), G. M. Heck (1322), T. M. Massis (1311), L. J. Allen (1423), R. R. Weinmaster (1311), E. L. Mangan (1413), K. J. Payne (1422), and D. J. Burns, team manager. In the front row, from left, are R. E. Shaut (1433), F. J. Mistretta (1321), G. R. Fahrbach (1413), C. E. McCarty (1433), J. M. Willis (1422), J. W. Kane (1322), and W. H. Fulcher (1333). Not in picture are team members E. W. Glaze (1433), P. T. Lubeck (1443), C. D. Longerot (1414), and R. C. Lawwill (1312). Season record for the team was 9 won, 5 lost.

Welcome Newcomers

July 13 - 24

Albuquerque
Ike L. Davis 4574
*Eldred R. Harrington (temporary) 1314
*Joann F. Marksbury 3152
Richard L. Miller, Jr. 3413
Ruth E. Wright 1433

Arizona
Patrick E. Cassidy, Tucson 1113

California
Robert L. Kruse, Pasadena 5426

Iowa
Rodney R. Boade, Ames 5414

Kansas
James D. Engelland, Sterling 1322
David M. Zagar, Kansas City 5414

Maryland
James J. Anastasio, Forest Heights 1513
David L. Caskey, Linthicum 7434

New Jersey
James H. Renken, Rockaway 5411

New Mexico
Richard A. Adams, Las Cruces 1314
Herman Kaneshiro, Belen 4574
Edwina G. Manzanares, Belen 4372
Phyllis Ann Saulnier, Los Lunas 3126

New York
Stanley F. Yager, Watervliet 2122

Ohio
James L. Jackson, Cincinnati 5133

Oklahoma
Gene A. Jones, Oklahoma City 5133

*Denotes rehired

Sandia Authors

Current or forthcoming articles by Sandia authors in technical journals include the following:

C. E. Land, G. W. Smith, and C. R. Westgate (all 5136), "The Dependence of the Small-Signal Parameters of Ferroelectric Ceramic Resonators Upon State of Polarization," June issue, **Transactions of the IEEE Professional Technical Group on Ultrasonics Engineering.**

C. E. Land, G. W. Smith, and I. D. McKinney (all 5136), "Polycrystalline Ferroelectric Multiremanence Memory Elements," June issue, **1964 IEEE International Convention Record.**

A. F. Cone (2110) and H. F. Dodge (Sandia Consultant), "A Cumulative-Results Plan for Small-Sample Inspection," July issue **Industrial Quality Control.**

Sandia ECP Fund Distribution Has Passed $100,000

Members of the Employees' Contribution Plan have given $109,938 to the United Community Fund and seven other agencies so far this year. As the June checks—totaling $14,411—were mailed recently, the following distribution had been made.

	June	Year to Date
United Community Fund	$11,745	$88,936
American Cancer Society	720	5,533
Bernalillo County Heart Association	590	4,587
National Arthritis and Rheumatism Foundation	187	1,436
New Mexico Society for Crippled Children and Adults	533	4,056
National Multiple Sclerosis Society	187	1,436
Cerebral Palsy Association of Bernalillo County	100	765
Muscular Dystrophy Association of America	201	1,537
Reserve Fund	144	1,089
	$14,411	$109,938

SHOPPING CENTER

CLASSIFIED ADVERTISING
Deadline: Friday noon prior to week of publication unless changed by holiday.

RULES
1. Limit: 20 words
2. One ad per issue per person
3. Must be submitted in writing
4. Use home telephone numbers
5. For Sandia Corporation and AEC employees only
6. No commercial ads, please
7. Include name and organization
8. Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.

FOR SALE

BOOSEY & HAWKES wooden clarinet, used one school year, cost $140, sell for $95. Stoever, AL 6-2439.

FRIGIDAIRE ELECTRIC RANGE, pale yellow, w/extras, $150; twin Hollywood beds w/mattresses, box springs, blue fitted spreads by Modesta, $95. Hempen, 268-7989.

INEZ BRICK, 3-bdr., 1¾ bath, large study, large screened porch, $17,000, 2409 Hendola NE. Hardee, 298-5724.

'56 MERCURY, automatic transmission, new battery, $225; Hot Point auto. washer, $50. Nix, 298-6068.

CUSTOM BUILT CAMPING TRAILER, top lowers for traveling, $400 or trade. Flowers, 298-2490.

'63 LAMBRETTA SCOOTER, Series E, $265. Smith, 243-3292 or 299-8259 after 5:30.

RECLINING CHAIR w/vibrator, $50; '52 Studebaker sedan, RH, OD, $100. Lerma, 268-1206.

GUITAR AMPLIFIER, custom built Hi-Fi quality, 4 input jacks, electronic tremolo w/provision for remote switch, $175. Glover, 298-7302.

FRIGIDAIRE ELECTRIC RANGE, $75; 11 each interior panel doors, 6-30" and 5-25", $3 ea. Rauch, 268-0232.

DUNCAN PHYFE COUCH, $35; 42" gas range w/clock-bell timer, $35. Hayes, 299-1200.

'64 OLDS 98 4-dr., PB, PS, and seats, tinted glass, 7000 miles; new Bell & Howell 8mm movie camera, $35 or best offer. Sheaffer, 255-9473 after 5.

SW VALLEY, 3-bdr., den, 26' LR w/vigas, 2 fireplaces, carpeted, 1¾ bath, double carport w/storage, 2000 ft., new $17,500 FHA available. Roth, CH 3-7049.

'56 PONTIAC 2-dr. HT, R&H, Hydro., original owner. Hanen, 268-9749 after 5:30.

'62 FORD GALAXIE 500 XL, HT, automatic transmission, PS, 20,000 miles, below NADA price. Rea, 299-9315.

30' HOUSE TRAILER, used, 1-bdr., kitchenette, shower in bathroom, $425. Askin, 255-9659.

TWO SNOW TIRES, 6.70 x 15, $10. Woodley, 268-6871.

3-BDR., carpeted, drapes, big closet, walled, garage, newly redecorated, $350 down FHA, total $11,550, $86/mo. Martinez, AX 9-8288.

WESTERN SKIRT, gabardine, black; western shirt, grey stripe cord, size 18; tooled belt, used twice, sell for $15. Van De Velde, AL 5-8174 after 5.

'53 MORRIS MINOR, 30-mpg in town, $175; motor scooter w/new 2½HP Clinton, $40. Runyan, 255-6719.

MATCHING vanity stool, vanity, and chest of drawers; overstuffed chairs; old fashioned mirrors; tow bar. 4316 San Andres NE, Fox, 344-8592.

'58 COMPETITION TRIUMPH TIGER CUB, 22 hp, Joe Hunt Mag., big carb. Campbell, 299-4830 after 5.

'52 STUDEBAKER Champion, R&H, $75. Schneider, AX 9-3769.

STEEL CLOTHESPOLES and lines, including concrete base, 120 ft. of line, total 4 lines. Wymer, 299-0717.

BOY'S BICYCLE, 26" 3-speed, used, frame bent, $10; used lavoratory complete w/fittings, $5. Roberts, 255-9527.

'59 VOLKSWAGEN SEDAN, $795; play pen and pad, $15. Labrier, AX 8-2835.

WASHER, GE Easy Flow, '60 model, $50. Peterson, 256-6836.

MOTORCYCLE, 10 HP Allstate, 4 speed, windshield, 3400 miles, $145. 2717 Mary Ellen NE. Hassig, 298-1455.

HOFFMAN BRICK HOME, Inez area, 3-bdr, 1¾ bath, a/c, carpeted, large walled yard, sell below $16,000 appraisal. Mills, 298-4537.

'47 CHEV. 2-dr., R&H, 2 new tires, $75. Hansen, 299-2337.

IDLER auto and home evaporative cooler, 6 volt w/110/6 volt transformer. Elwell, 256-2619.

'55 DODGE V-8, low mileage. Davis, AM 8-4907.

'63 PLYMOUTH VALIANT 4-dr., R&H, stnd. trans, $1300. Martin, 298-0152.

CAMP TRAILER, home made. Williams, 282-3379.

NYLON BABY PEN, $10; auto set, $1.50; baby dressing stand, $2; infanseat, $1.50; auto bed, $6; rocking horse, small, $2; training chair, $1.50. Baxter, 298-1567.

'62 MUSTANG motorcycle w/accessories. Jordan, 298-4706.

'59 CHEVROLET 4-dr. Impala, one owner, Powerglide, FrigiKing air, 44,000 miles. Gonzales, 299-7784.

1930 MODEL A FORD, running condition, $200, 2902 John St. SE, Sanchez.

'53 CHRYSLER, 4-dr., a/c, PB, PS, $100. Rudeau, 256-2380.

65,000 BTU wall furnace, $65; 40-gal. electric hot water heater, $25. Elder, 898-3780 after 6.

'62 RAMBLER, CLASSIC 6. Mould, AL 6-7336.

TOY AND MINIATURE POODLES, silver, apricot, and cream, $75 to $150. Terms arranged. Tessler, 344-1843.

'60 LINCOLN PREMIERE 2-dr, a/c, PS, PB, 34,000 miles, tinted glass. Quinlan, AM 8-5665.

BLOND BRICK 3-bdr. home, paneled den, fireplace, carpeting, covered patio, walled, sprinklers, below appraisal, $17,900, $700 down FHA. Fite, 255-6943.

.22 cal. Hi Standard revolver and holster, 9 shots, chrome plated w/black handles, $38. Archuleta, 255-6781.

'57 BUICK WAGON, all power, factory air, R&H, belts, $485; '52 Chev. pickup, 4-speed, overloads, canvas camper, belts, R&H, $275. Heames, 255-2291.

JEEP PICKUP FWD, home made camper, will trade for overhead camper or boat. Geilenfeldt, AL 6-7357.

FRANCISCAN EARTHENWARE DINNERWARE Stardust pattern, service for 5 and serving pieces, oven-safe. Johnson, 298-0905.

'63 JEEP WAGONEER, 2-wd, 3-speed transmission, $2100. Schwiner, 255-9263.

HOTPOINT clothes washer and canvas covered luggage carrier for compact car. Hoagland, 299-7097.

GERMAN SHEPHERD, black and tan female, 7 months old, AKC, $50. Diesing, 298-1352.

WADING POOL, 10' dia. x 24" deep, $12. Liguori, 256-3613.

'62 MG MIDGET. McMaster, 268-8062, 6308 Kiowa NE.

ONE-WHEEL TRAILER, new spare wheel and tire, aluminum cover, $65. Linker, 299-4057.

BRICK, 3-bdr., 1¾ baths, garage, carpeted, a/c near schools-Winrock, range included, open, 1312 Kentucky NE. Buckalew, 255-3062.

'63 RAMBLER Classic 660 station wagon, 6-cyl., std. transmission, R&H, a/c, tinted windows, reclining seats, book price. Olson, 298-3795.

'60 MGA, maroon, wire wheels, new top, new tires, new side curtains, $1100. Rice, 268-5803.

'61 VESPA GS, make offer. Hickman, 11617 Clifford NE, 298-3804.

'60 PLYMOUTH 4-dr., new tires, white top, light blue body, will guarantee. Villella, 268-7045.

'62 FORD GALAXIE 4-dr. V-8, OD, R&H, white over red, sell or trade for pickup w/wo camper. Henry, 255-2536.

SIX PADLOCKS keyed alike w/12 identical keys, American brand, in original carton. Illing, 299-7378.

ELECTRIC GUITAR, $30; trumpet w/case, $40; shotgun, 12 ga., $40. Jones, AX 8-3849.

14' HOME MADE HOUSE TRAILER w/apt.-size gas stove, $150. Salazar, AL 5-1301.

'60 WHITE 4-dr. OLDS Dynamic, 37,000 original miles. Davis, AL 5-1050 after 5.

'56 OLDMOBILE, Super 88, 4-dr., HT, PB, PS, automatic transmission, make offer. Hollis, 299-7209.

STAMP COLLECTION, U.S., Central and S. America, plate blocks and sundry. Gray, 299-7035.

BOAT AND TRAILER, 16' aluminum Texas Maid, wide and deep, 45 HP Mercury motor, windshield and convertible top. Samuelson, 298-3637.

MOUNTAIN HOMESITE in Canyon Estates, corner lot, view, seven miles east of city. Johnson, 298-0905.

3-BDR., walled yard, landscaped, central heating/cooling, built-ins, assume GI $1800 down, consider second mortgage, payments $95. Bailey, 299-1275.

PLAYGROUND SLIDE, 10', stainless steel, $8.50. Randall, 299-3935.

8 CU. FT. Western Auto refrigerator. Busby, 299-6450.

'60 PLYMOUTH FURY convertible V-8, automatic, PS, PB, R&H, w/walls, belts, Book $1170, sale, $1050. Gustafson, 299-3270.

LAWN MOWER, push type, luggage rack; Kelvinator ref. air conditioner. 1025 Maxine NE. O'Trimble, AX 9-0198.

4 PIECE SET BOOMERANG CHAIRS, plastic covering, wrought iron legs, orange and white, $45. Hinman, AX 8-1027.

'63 FORD GALAXIE 500 XL convert., 406 cu. in. 405 HP V-8, bucket seats, 4-speed, R&H, seatbelts, below NADA. Davis, 256-1294.

POPULAR ELECTRONICS magazines, October 1954 through June 1964 (117 issues), $10. Boling, 282-3256.

3-BDR., den, fireplace, 2 baths, double carport, Collett Park school dist., $500 under appraisal, $13,950. Butler, 299-5626.

AKC REGISTERED silver miniature poodle puppies, terms available. Workhoven, 282-3260.

CUSHMAN MOTOR SCOOTER, 5 HP engine, best offer over $40; 3 lawnmower engines, overhauled, $15 ea. Tassia. 255-0195.

'50 PONTIAC 4-dr., hydromatic, R&H, $50. Newman, 268-0314.

3-BDR., 1¾ bath, landscaped, near Collett Park, selling at $18,500 FHA appraisal, $800 down. Todd, 2012 Muriel NE, after 6.

SOLID MAPLE twin-sized bed, originally from Modestas, cost $74, sell for $30. Bader, 299-9459.

STOREY & CLARK mahogany spinet piano, $350. Foor, 298-4980.

AKC REGISTERED Weimaraner puppies w/papers, 2 females left. Miller, 298-2850 after 5.

7-PIECE DINETTE, $15; gas range, $35; screen door, $4.50; new size 8 girl's ice skates, $7.50. Chaves, 255-6155.

RECAPPABLE ATLAS white wall tire, 7.50 x 14, 1/8" tread depth, $3. Arasim, 298-8431.

'52 PONTAC 4-dr. wagon, R&H, automatic trans., 11409 Baldwin Ave. NE. Valencic, 299-5736.

'61 PONTAC, a/c, AT, PB, PS, below NADA. Bland, 268-4913.

4-BDR. MOSSMAN, den, 1¾ baths, carpet, drapes, a/c, large concrete patio, attached garage, near schools, FHA appraisal. Doyle, 255-1483.

'58 CHEVROLET sedan delivery, 6-cyl, stick shift; Boxer puppies. Bewley, 298-5728.

ANTIQUE CLOCKS: 1822 Chauncey Jerome weight driven mantle clock w/reverse painting, $60; Figure 8, 1800 Danial Pratt shelf clock, $70. Shelton, 299-0935.

RUGER SUPER Blackhawk .44 Mag. in mahogany case w/belt, holster, ammo; Hi Standard HDM .22 target pistol, will trade for other guns. Zaluga, 344-1564.

KENMORE WASHER-DRYER, 230 volts; Amana deepfreeze; twin bedroom set; blond end tables; blond coffee table, Coldspot refrigerator. Johnson, 255-0262.

3-BDR., den, 2060 sq. ft. plus oversize double garage at 9812 Haines NE; Colt automatic .22 pistol. Beasley, 298-3398.

BATHINETTE, play pen, infanseat, nip-N-nap, sterilizer, diaper pail, together or separately. Amos, 298-4470.

VANITY, kidney shape with skirt and glass top $6; matching vanity bench, $3.50; five-drawer chest, pine, natural finish $12. Hansen, 3119 Lykes Drive NE, 298-0308.

3-BDR. ROBERSON, private study, utility room, enclosed patio w/BBQ, $18,500; 2-bdr., walled, near Base, shopping, schools, kindergarten, $9500. Abbott, AX 9-8860.

'56 OLDS 4-dr.; '57 Dodge 2-dr., both engines overhauled, automatic transmissions on both, PS on Olds. Anderson, 264-1731, Santa Fe phone 983-6819.

20" GIRL'S bicycle, $12, pneumatic tires w/thorn-proof tubes, kickstand and training wheels. Black, 299-3369.

TIRE w/w tubeless 7.50 x 14 Atlas, $8; car radio w/6" speaker, $9. Wesnak, 265-4765.

BABY BUGGY, $30; baby car bed and chair combination, $2; safety server, $10. Judd, 299-6536.

RCA ELECTRIC RANGE w/double oven and grill; Schwinn Pixie 16" bicycle; used poultry wire. Fimple, 256-0290.

EVAPORATIVE ROOM COOLER, $10. Latham, 2801 Vermont NE.

FOR RENT

2-BDR FURNISHED APARTMENT, including washer, 122 Glorieta NE. Downs, 298-6973 evenings and weekends.

NW VALLEY, 2439 Oro Vista NW, 3-bdr. and den, 1¾ bath, unfurnished or partly furnished. Griego, 344-2987.

3-BDR. PARTLY FURNISHED, hw/floors, fireplace, carpet, a/c, large yard, available Aug. 8. 1313 Childers NE. Saviteer, 298-1430.

TWO-BDR. duplex, a/c refrigerator and stove furnished, near Sandia, $70/mo. Villella, 268-7045.

WANTED

FORM CAR POOL in Mountain area for Sandia Base kindergarten. Wilson, 282-3225.

2 BALLOON TIRED BICYCLES in bad condition, all I need are the wheels and tires. Netz, 282-3607.

RIDE to bldg. 802 from Princeton and Central. Gobeli, 264-4547 after 5.

CAR POOL from vicinity Eubank and Comanche to bldg. 880. Wright, 299-8939.

1958-60 Renault Dauphine, must be in good shape and reasonable. Martell, 344-3881.

SOMEONE RETURNING by air from New York City late August to accompany my son, age 12, airport to airport. Baxter, 344-7601.

RIDE OR JOIN CAR POOL from corner of Ranchitos and Rio Grande NW to bldg. 892 or 880. Zickert, 898-3475.

RIDE from vicinity of 4th and Indian School Rd. NW to bldg. 802. Dyer, 242-8830.

ARMY 5-man hexagonal tent with liner, near new. Weaver. 242-5560.

CHILD CARE and housekeeping, own transportation, references available. Gutierrez, 243-5177.

TO TRADE 1956 Lambretta scooter for camping equipment, AM-FM tuner, woodworking equipment or what have you? Rose, 298-6238.

RIDE from Leesure Acres to Bldg. 802. Redmond, 344-6813.

SINGLE MAN to share house, kitchen and other privileges. Jackson, 256-1672.

TO BORROW 4-wheel flat bed trailer for Square Dance Float in State Fair parade Sept. 17th. Arning, 256-9229.

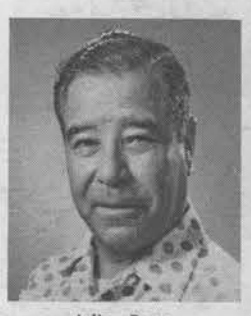
LOST AND FOUND

LOST—Brown wallet, ladies sunglasses, bifocal safety glasses, Sheafer fountain pen, red ping pong paddle, car keys-Buick & Chrysler, pipe w/yellow bowl. LOST AND FOUND, 264-2757.

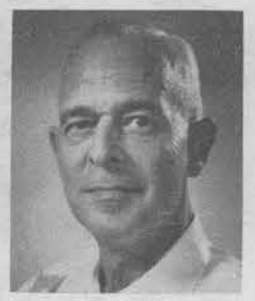
FOUND—Pen knife, gold tie clasp, man's beige sweater, silver pendant, white drop earring, safety glasses case, pearl earring. LOST AND FOUND, 264-2757.

Service Awards

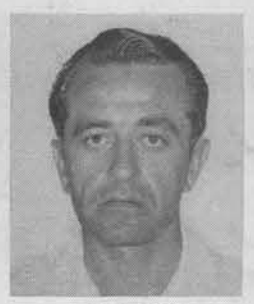
15 Years



Julian Perea
4611
Aug. 1, 1949



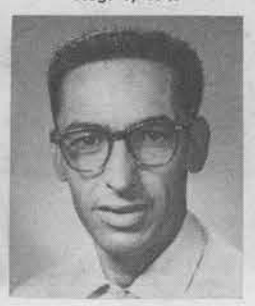
V. R. Morrison
3242
Aug. 1, 1949



J. J. Sandelich
2136
Aug. 1, 1949

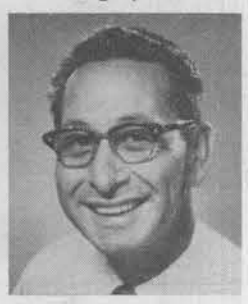
R. M. Hawk
4111
Aug. 2, 1949

C. R. Ray
2624
Aug. 2, 1949



J. J. Tafoya
4613
Aug. 3, 1949

E. L. Ford
1432
Aug. 4, 1949

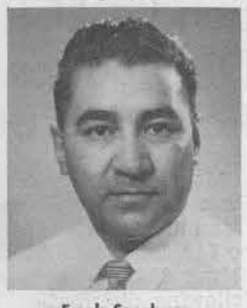


H. A. Saavedra
4211
Aug. 4, 1949

M. H. McGirk
1511
Aug. 8, 1949

C. S. Sandoval
4514
Aug. 8, 1949

J. P. Cody
1320
Aug. 10, 1949



Frank Speakman
4153
Aug. 12, 1949

10 Years

Aug. 1 - 14

Charles H. Carlson 1432, C. O. Erickson 8114, Benjamin F. Davis 8221, Walter L. Nufer, Jr. 1543, Andrew J. Fry 4252, A. Morris MacGibbon 4514, Robert V. Neighbors 8168.

Peter J. Komen, Jr. 1422, Lionel R. Chandler 2118, Elwood F. Ingledue 8166, Wentzel W. Wagoner 1531, Dorothy P. Alderman 3321, Martha R. Newby 3462.

E. F. Wienczkowski 4253, A. R. Iacoletti 7622, Bobby G. Neeld 1323, Harry Mason 5413, Roy S. Tackett 5332, and Irvin G. Pytlik 8114.

Seek Students for New EE Course At University

Two Sandia Corporation employees are seeking the names of Sandians who are interested in the possibility of taking Course EE 201—Electrical Engineering I, in the evening at the University of New Mexico. Although the course is not presently offered as an evening course by the University, they are hopeful of forming a class to meet from 6:30-7:45 p.m. on Tuesdays and Thursdays, Fall Semester, 1964.

Prerequisite for the course is Physics 260: corequisite is Mathematics 263. Individuals interested in the possibility of forming a class should contact A. D. Bridegam (4412), home tel. 268-1973; or B. T. Reich (4412), home tel. 268-7968.

Construction Starts On Building at Livermore Lab Area 8

The AEC has announced the awarding of a contract to the Payne Construction Company of Oakland, Calif., for work to be done at Sandia Corporation Livermore Laboratory.

The project includes construction of a one-story, reinforced concrete and masonry building of 2070 sq. ft. near the Area 8 Firing Facility. Also included is construction of 1500 sq. ft. of office space as an addition to Bldg. 973, in the same area.

Site improvements in the contract call for retaining walls, concrete and asphalt paving, and installation of utilities. Work began July 22 and completion is expected around Jan. 22.

Payne Construction Company has performed other construction jobs at Livermore Laboratory, including Bldg. 913. For the present contract, they submitted the lowest bid at $150,446.

LABORATORY building to be constructed in Sandia Corporation Technical Area I will adjoin Bldg. 806. The structure is expected to cost between $2,250,000 and $2,325,000. The AEC will open construction bids on Sept. 23.

Artist Ben Aikin Does Mural For Livermore Civic Building

The City of Livermore is richer for the efforts of Sandia artist Ben Aikin (8233). An unusual mural now hangs outside the Justice Court in the new Civic Building.

Ben painted the 5- by 8-ft. mural in response to a request by Chamber of Commerce board member James L. Rowe (8220). It portrays in colorful yellow, blue, green and brown montage the early history and life of the Livermore Amador Valley during the ranchero and mission era around 1830.

Since a mural is a representational painting which has the function of telling a historical story in pictures, Ben says he was not free to express himself as is possible in other types of art.

He spent some hours in the Livermore Public Library researching historical data before beginning the preliminary sketches and layouts of the mural. In addition to research time, about 80 hours were required to complete the painting. He worked evenings and weekends in the garage of his home.

The painting is displayed in a waxed redwood frame and has a built-in visual illusion, according to Ben. When first viewed from a distance it appears to be an abstract work. However, as the viewer gets closer, the forms of Indians, a Spanish lady, a vaquero and a priest become very clear and the abstract effect disappears.

This is the first of two paintings to be done for the City of Livermore by Ben. The second mural, also planned to hang near the Justice Court entrance, will match this first work. It should be completed in September and will depict activities in the Valley up to about 1890, including wine growing, cattle raising, and the annual rodeo.

LIFE IN THE LIVERMORE VALLEY up to about 1830 is portrayed in this mural by Ben Aiken (8233). The mural was presented to the City of Livermore as a gift by Ben. He is painting a second mural, similar to this one, depicting life in the valley up to about 1890. The second mural should be completed in September.

Sandia Speakers

Following is a list of speakers, titles, and places of presentation for recent talks by members of Sandia Corporation.

Marvin Moss (5135), "Metastable Phases Produced by Plasma Jet Metal Spraying," American Physical Society, June 25-27, Denver, Colo.

A. F. Cone (2110), "A Cumulative-Results Plan for Small-Sample Inspection," 9th Annual Reliability and Industrial Statistics Courses, Aug. 6, U.C.L.A.

W. W. Troy (3243), "An Integrated Security Program," Bernalillo County Citizens Unit, May 28, Albuquerque.

A. E. Bentz (7413), "Nuclear Power and the Aerospace Nuclear Safety Program at Sandia Corporation," Albuquerque Junior Chamber of Commerce, June 8.

D. J. Jenkins (3130), "Maintaining Technical Vitality," 20th annual Conference of American Society of Training Directors, June 8, San Francisco; "Business Ethics," Heights Lions Club, June 25, Albuquerque.

C. A. Olson (7243), "Cloud Seeding," Heights Lions Club, June 11, Albuquerque.

H. D. Sivinski (7311), "Some Environmental Problems of Space Travel," Rio Grande Lions Club, June 12, Albuquerque.

S. S. DeVault (3211), "Safety at Home and in the Office," Pilot Club International, Albuquerque chapter, June 23.

J. D. Shreve (5412), "New Science and Old You," Rotary Club, June 25, Santa Fe.

E. C. Peterson (3320), "Labor Relations," economics class, College of St. Joseph, July 13, Albuquerque.

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